WHAT IS CLAIMED IS:

1. A composition of matter comprising:

a) an epoxy composition comprising the reaction product of:

i) an epoxy component, and

ii) an anhydride component; and

b) a visible light-emitting phosphor material, said phosphor material substantially uniformly distributed throughout said molding compound.

2. A composition as in claim 1, wherein said epoxy component comprises triglycidyl isocyanurate.

3. A composition as in claim 1, wherein said anhydride component comprises hexahydrophthalic anhydride.

4. A composition as in claim 1, wherein said epoxy composition further comprises a polyol for promoting reaction of said epoxy component and said anhydride component.

5. A composition as in claim 4, wherein said polyol is selected from the group consisting of glycerol, trimethylol propane, ethylene glycol, diethylene glycol, propylene glycol, dipropylene glycol, and mixtures thereof.

6. A composition as in claim 1, wherein said phosphor material is capable of converting ultraviolet and blue light into visible white light.

7. A composition as in claim 1, wherein said epoxy component comprises from about 20 weight percent to about 75 weight percent of said composition based on the total weight of the composition.

8. A composition as in claim 1, wherein said anhydride component comprises from about 20 weight percent to about 75 weight percent of said composition based on the total weight of the composition.

9. A composition as in claim 1, wherein said phosphor material comprises from about 0.5 weight percent to about 20 weight percent of said composition based on the total weight of the composition.

10. A composition as in claim 9, wherein said phosphor material comprises from about 5 weight percent to about 12 weight percent of said composition based on the total weight of the composition.

11. A molding compound comprising the composition of claim 1.

12. An encapsulant material for electronic components comprising a molding compound having a weight average molecular weight of about 5,000 to about 20,000, said molding compound comprising a reaction product of a partially cured epoxy composition having a phosphor material substantially uniformly distributed therethrough.

13. An encapsulant material as in claim 12, wherein said partially cured epoxy composition has a weight average molecular weight of about 400 to about 1,000.

14. An encapsulant material as in claim 12, wherein said molding compound is prepared by B-staging a partially cured mixture of said epoxy composition and said phosphor material which has been previously subjected to partial curing to increase the viscosity of said epoxy composition and suspend said phosphor material within said epoxy composition during mixing of said mixture.

15. An encapsulant material as in claim 12, wherein said epoxy composition comprises the reaction product of an epoxy compound and an anhydride.

16. A method of preparing a molding compound comprising:

a) providing an epoxy composition comprising an epoxy component;

b) mixing a visible light-emitting phosphor material with said epoxy composition to provide a homogeneous mixture with said phosphor material suspended within said epoxy composition;

c) increasing the viscosity of said homogeneous mixture while maintaining said phosphor material suspended within said epoxy composition to form a pre-reacted intermediate; and

d) partially curing said epoxy composition of said pre-reacted intermediate, thereby forming said molding compound.

17. A method as in claim 16, wherein said increasing of viscosity of step c) comprises partially curing said epoxy composition to an initial viscosity capable of maintaining said phosphor material suspended throughout said epoxy composition.

18. A method as in claim 17, wherein said increasing of viscosity of step c) comprises heating said homogeneous mixture to a temperature of about 50°C to about 90°C for a period of about 10 minutes to about 30 minutes to affect partial curing of said epoxy composition.

19. A method as in claim 16, wherein said pre-reacted intermediate has a viscosity of about 300 to about 900 centipoise.

20. A method as in claim 16, wherein said partially curing step d) comprises partially curing from about 40% to about 60% of said epoxy component.

21. A method as in claim 16, wherein said partially curing step d) comprises heating said pre-reacted intermediate to a temperature of about 50°C to about 100°C for a period of about 30 minutes to about 24 hours.

22. A method as in claim 16, wherein said epoxy composition comprises an epoxy component and an anhydride component.

23. A method as in claim 22, wherein said mixing step b) comprises:

mixing said epoxy composition and said phosphor material at a temperature of about 80°C to about 140°C while stirring;

cooling said mixture to about 45° C to about 85° C; and

adding a polyol to said mixture.

24. A method of preparing a molding compound comprising:

a) providing an epoxy composition comprising an epoxy component and an anhydride component;

b) mixing a visible light-emitting phosphor material with said epoxy composition at a temperature of about 105°C to about 110°C to provide a homogeneous mixture with said phosphor material suspended within said epoxy composition;

c) cooling said mixture to a temperature of about 60°C to about 65°C;

d) adding a polyol to said mixture for reaction with said anhydride component;

e) increasing the temperature of said mixture to about 70°C to about 80°C for a time period of about 10 minutes to 30 minutes to cause an increase in the viscosity of said mixture while maintaining said phosphor material suspended within said epoxy composition to form a pre-reacted intermediate; and

f) B-staging said epoxy composition at a temperature of about 65°C, thereby forming said molding compound with said phosphor material uniformly distributed therethrough.

25. A method of encapsulating an optoelectronic device comprising:

a) providing an optoelectronic device;

b) providing a molding compound comprising a light-emitting phosphor material homogeneously mixed within a partially cured epoxy composition;

c) encapsulating said optoelectronic device with said molding compound, and

d) fully curing said epoxy composition.

26. A method as in claim 25, wherein said optoelectronic device is a light-emitting diode.

27. A method as in claim 26, wherein said light-emitting diode is capable of emitting ultraviolet and/or blue light and said phosphor material is capable of converting said ultraviolet and/or blue light into visible light.

28. An optoelectronic device comprising a light-emitting diode having an encapsulant surrounding said light-emitting diode, said encapsulant comprising a reaction product of a cured epoxy composition having a phosphor material substantially uniformly distributed therethrough.

29. An optoelectronic device as in claim 28, wherein said epoxy composition comprises an epoxy component and an anhydride component, and said phosphor material is substantially uniformly distributed throughout the epoxy composition.

30. An optoelectronic device as in claim 28, wherein said encapsulant comprises a fully cured reaction product of a B-staged epoxy composition, said epoxy composition prepared by B-staging a partially cured mixture of said epoxy composition and said phosphor material which has been previously subjected to partial curing to increase the viscosity of said epoxy composition and suspend said phosphor material within said epoxy composition during mixing of said mixture.

31. An optoelectronic device as in claim 28, wherein said light-emitting diode is capable of emitting ultraviolet and/or blue light and said phosphor material is capable of converting said ultraviolet and/or blue light into visible white light.

32. An optoelectronic device as in claim 28, in which the upper surface of said encapsulant is dome-shaped.